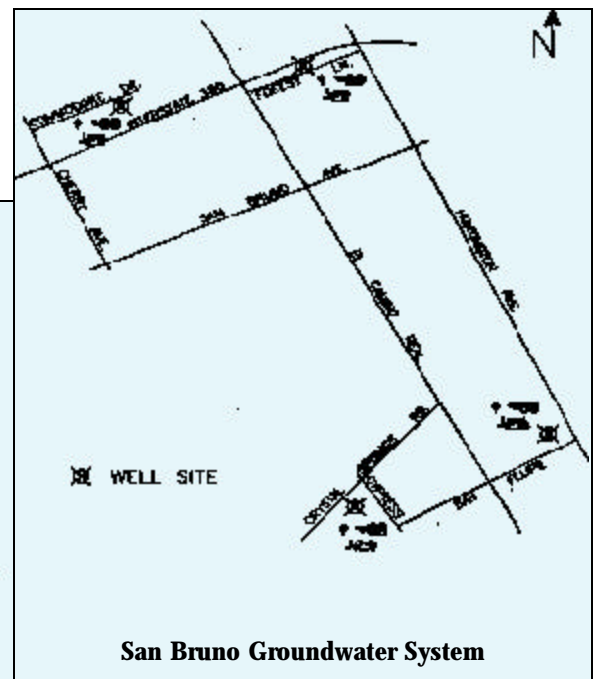
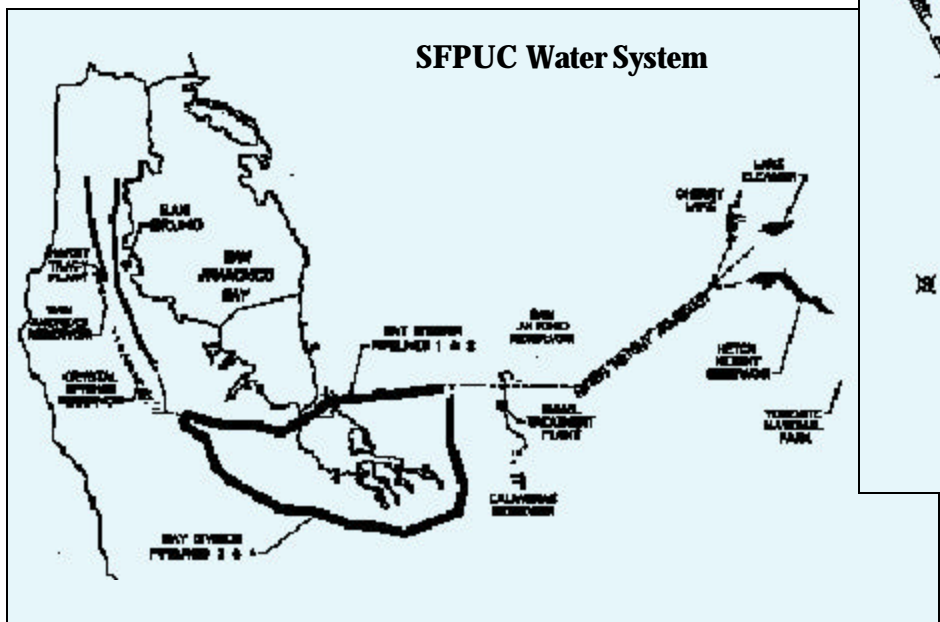




## A photograph of a water treatment facility. In the foreground, there are two large blue pipes with yellow valves and red handwheels. The pipes are connected to a network of blue machinery, including large pumps and motors. The floor is covered with a green metal grate. The background shows more industrial equipment and a brick wall. Overlaid on the image is the text: "WHERE OUR WATER COMES FROM (SOURCES OF OUR WATER)".

Water purchased from the San Francisco Public Utilities Commission (SFPUC) Hetch Hetchy system consists of surface flows which originate in the snow capped peaks of Yosemite National Park and the Stanislaus National Forest. Because this source is located in mountain wilderness with limited human access, the quality and purity of this water is consistently high. This water is stored in a system of reservoirs in the Sierras, and is transported 150 miles across the San Joaquin Valley and through the Coast Range mountains via a series of pipelines and tunnels to the Bay Area.

The supply of water for the City of San Bruno is derived from two (2) primary sources, surface water





## WATER QUALITY

Water quality is extremely important to the staff of the City of San Bruno Water Division. The City of San Bruno Water Division employees are State Health Department certified Grade 1 and 2 Water Treatment Operators, the Water Services Manager is a Grade 3 Water Treatment Operator. The Water Division maintains a laboratory and conducts or supervises more than 600 analyses of water samples each year. The staff samples daily from supply sources, treatment facilities and distribution systems throughout your service area. Using state-of-the-art laboratory equipment capable of measuring minute quantities of contaminants in the parts per million range, samples are analyzed on a continuous basis to insure that compliance standards are met and maintained. Additional samples are delivered to a contracted State-certified independent laboratory for further analysis. You can be assured that your water consistently meets or exceeds established quality standards.

**Source Protection** is the primary barrier, the first line of defense against contamination of your drinking water at its source. SFPUC maintains a comprehensive watershed control and management program to protect source water. The Hetch Hetchy Reservoir water supply meets all Federal and State criteria for watershed protection,

disinfection treatment, bacteriological quality and operation standards. SFPUC controls activities on the watershed lands around their East Bay reservoirs, limiting activities to those compatible with maximum protection of the water quality. As a result, the U.S. EPA granted the Hetch Hetchy water source a filtration exemption so that water from this source does not require filtration treatment to ensure its safety. SFPUC monitors Hetch Hetchy weather conditions, water turbidity levels, coliform bacteria levels, pathogens and parasite concentrations. SFPUC also complies with disinfection, sampling and reporting requirements, as well as conducts regular inspections of the protected Hetch Hetchy watershed and reservoirs.

**Water Treatment** is the next protective

barrier. Our well water is injected with sodium hypochlorite solution at the well head to insure proper disinfection. Also, our well water is sampled weekly to insure the health and safety of our consumers. In addition, our Forest Lane Well is equipped with a filtering plant to remove iron and manganese and adjust pH levels prior to distribution to our customers. This is to insure that water from this particu-

# How Do We Know Our Water Is Safe To Drink?



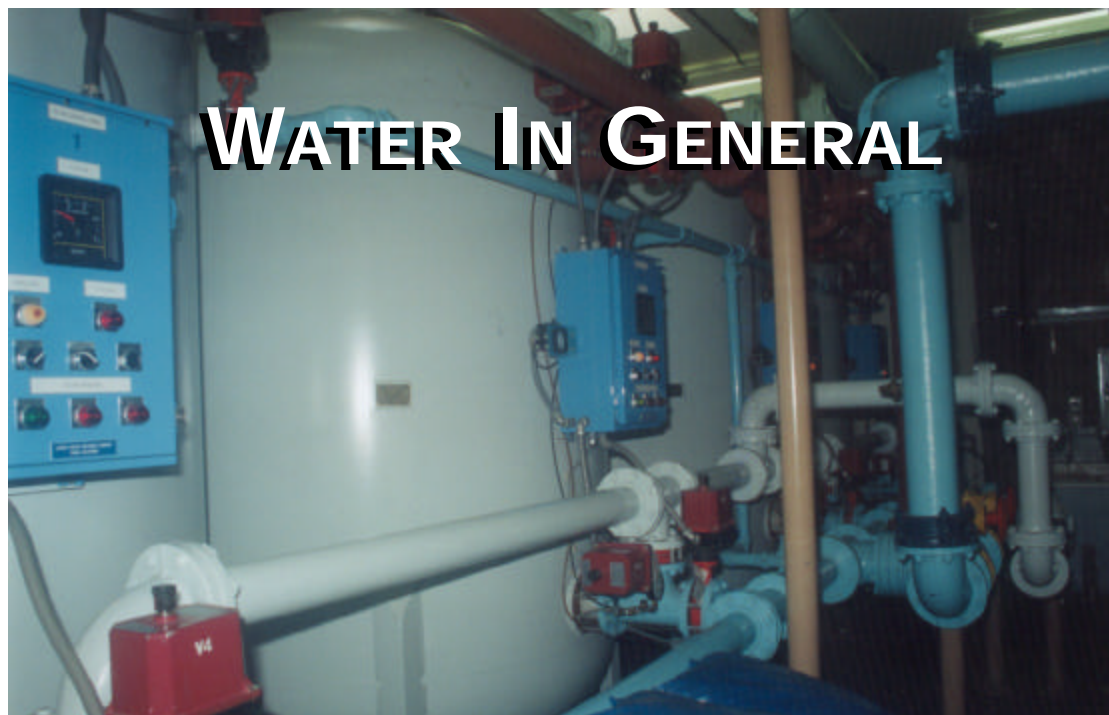
lar well meets or exceeds all Secondary Drinking Water Standards as set by the State Department of Health Services.

**Effective Operation and Maintenance** of the distribution system assures that the water maintains its quality as it travels through the system to your tap. The residual chlorine in the water after treatment prevents the regrowth of organisms during storage and transmission of water in the distribution system. The flushing of our water mains and rotation of stored supplies also keeps the water fresh and limits the possibility for growth of organisms. The City of San Bruno Water Division conducts weekly water quality testing of the distribution system to assure that the City's drinking water continues to be safe and healthy.

The City of San Bruno Water Division also maintains an active cross connection control program to help prevent the intrusion of potentially harmful materials into the drinking water system. Cross connection control is done by isolating hazards (boilers, cooling towers, fire sprinklers, etc.) from the drinking water supply by installing approved backflow prevention devices.







# WATER IN GENERAL

The sources of drinking water (both tap water and commercially bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

**MICROBIAL CONTAMINANTS:** such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural live stock operations, and wildlife;

**INORGANIC CONTAMINANTS:** such as salts and metals, which can be naturally-occurring or result from urban storm run-off, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

**PESTICIDES AND HERBICIDES:** which may come from a variety of sources such as agricultural, urban stormwater run-off, and residential uses.

**ORGANIC CHEMICAL CONTAMINANTS:** including synthetic and volatile organics, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater run-off, and septic systems;

**RADIOACTIVE CONTAMINANTS:** which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to insure that tap water is safe to drink, USEPA (United States Environmental Protection Agency) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Federal Drug Administration regulations

establish limits for contaminants in commercially bottled water which must meet the same public health standards.

Drinking water, including commercially bottled water, may reasonably be expected to contain small amounts of some contaminants. The presence of contaminants does not necessarily indi-

cate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Environmental Protection Agency/Center for Disease Control) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).



A photograph of industrial water treatment equipment, featuring large blue cylindrical tanks and various pipes and valves. The title "GENERAL INFORMATION ABOUT WATER" is overlaid in large, bold, white letters.

# GENERAL INFORMATION ABOUT WATER

## **CRYPTOSPORIDIUM**

Cryptosporidium is a parasitic microbe that is found in most surface water supplies and can potentially pose a health threat. If swallowed, it may produce cryptosporidiosis, with symptoms of diarrhea, stomach cramps, upset stomach, and slight fever.

Some people are more vulnerable to Cryptosporidium than others and should seek advice about drinking water from their health care providers. The SFPUC tests on a monthly basis for Cryptosporidium in the source and treated water. The SFPUC has found low levels of Cryptosporidium occasionally in the Hetch Hetchy, East Bay, and San Francisco Peninsula sources, but did not find any in treated water that was conveyed to your tap in 1999.

## **LEAD AND COPPER**

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. It is also recommended that homeowners run their tap 30 seconds to

2 minutes before use. Additional information is available from the Safe Drinking Water Hotline (800-426-4791).

The City of San Bruno Water Division has tested for Lead and Copper in the city water supply since 1992 as part of the Lead and Copper Rule monitoring program. Over 30 volunteers took water samples at the tap in their homes, which were then analyzed for lead and copper content as well as for the corrosive nature of the water. The water that the City of San Bruno Water Division delivers to customers does not contain lead, but it may acquire lead from older soldered pipe joints in household plumbing.

## **UNDERSTANDING THE CHARTS**

The following definitions are for each contaminant analyzed:

**PUBLIC HEALTH GOAL (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are unenforceable targets set by the California Environmental Protection Agency.

**MAXIMUM CONTAMINANT LEVEL GOAL (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (U.S. EPA).

**MAXIMUM CONTAMINANT LEVEL (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs and MCLGs as is economically or technically feasible. Secondary MCLs are set to protect odor, taste and appearance of drinking water.

**PRIMARY DRINKING WATER STANDARDS:** MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**VARIANCES AND EXCEPTIONS:** State or EPA permission not to meet an MCL or a treatment technique under certain conditions. The SFPUC and the City of San Bruno have no variances or exceptions for MCLs.

**TREATMENT TECHNIQUE (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**REGULATORY ACTION LEVEL (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.



# 1999 ANNUAL WATER QUALITY REPORT<sup>1</sup>

Contaminant	Unit	PHG <sup>4</sup>	MCLG <sup>5</sup>	MCL <sup>3</sup>	San Bruno Well Water		Major Sources in Drinking Water
					Range	Average	
PRIMARY STANDARDS: MANDATORY HEALTH-RELATED STANDARDS							
MICROBIOLOGICAL CONTAMINANTS							
Total Coliform - % monthly positive sample	% <sup>13</sup>	NS	0	5	<1	<1	Naturally present in the environment
Volatile Organic Chemicals (VOCs)							
Methyl tert-Butyl Ether (MTBE) <sup>18</sup>	ppb	NS	NS	5	ND	ND	Gas spills and leaks; gas additive
Trichloroethylene (TCE)	ppb	NS	NS	5	ND	ND	Discharge from metal degreasing sites and other factories
Disinfection By Products (DBPs)							
Total Trihalomethanes (TTHMs)	ppb	NS	NS	100	18.9-88.0	48.7	By-product of drinking water chlorination
INORGANIC CHEMICALS							
Aluminum	ppm	NS	NS	1	<1	<1	Erosion of natural deposits
Copper - City of San Bruno Tap Water	ppb	0.17	1.3 <sup>12</sup>	1.3	0.0159-0.009	0.0133	Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood perservatives
Lead - City of San Bruno Tap Water	ppb	2	0 <sup>12</sup>	15	<1.0-4.2	2.8	Corrosion of household plumbing systems, erosion of natural deposits
Nitrate (as NO <sub>3</sub> )	ppm	45	10 as N	45	0.3-5.54	3.46	Run-off and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
SECONDARY MAXIMUM CONTAMINANT LEVELS - Consumer Acceptance Limits							
Chloride	ppm	NS	NS	250	56-90	73.3	Runoff/leaching from natural deposits; seawater influence
Color	unit	NS	NS	15	2.6	2.6	Natually-occurring organic materials
Iron	ppm	NS	NS	0.3	0.1	0.1	Leaching from natural deposits; industrial wastes
Manganese	ppm	NS	NS	0.05	<0.05	<0.05	Leaching from natural deposits
Odor Threshold	TON	NS	NS	3	1	1	Naturally-occurring organic materials
Specific Conductance	uS/cm	NS	NS	900	110-780	444	Substances that form ions when in water; seawater influence
Sulfate	ppm	NS	NS	250	20-52	36	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	ppm	NS	NS	500	68-548	266	Runoff/leaching from natural deposits
ADDITIONAL CONSTITUENTS ANALYZED							
Alkalinity (as CaCO <sub>3</sub> )	ppm	NS	NS	NS	38-190	122	
Calcium	ppm	NS	NS	NS	14-60	26	
Hardness (asCaCO <sub>3</sub> )	ppm	NS	NS	NS	188-237	184	
Magnesium	ppm	NS	NS	NS	6.8-29.6	15	
pH	unit	NS	NS	NS	7.3-8.7	7.78	
Potassium	ppm	NS	NS	NS	2.2-6.7	3.9	
Silica	ppm	NS	NS	NS	25-30	27.5	
Sodium	ppm	NS	NS	NS	40-49	44	

(1) Water Quality Annual Report set forth in 40 CFR Parts 141 and 142 National Primary Drinking Water Regulation: Consumer Confidence Reports Rule.

(2) All results met State and Federal drinking water regulations.

(3) Maximum Contaminant Level(MCL) and secondary maximum contaminant level(SMCL) set by U.S.

(4) Adopted by the State Office of Environmental Health Hazard Assessment (OEHHA) of the California EPA.

(5) Maximum Contaminant Level Goal set by U.S. EPA.

(6) Turbidity is the water clarity indicator, it also indicates the quality of the water and the treatment system efficiency.



# ADDITIONAL 1999 SFPUC WATER QUALITY DATA<sup>1 2</sup>

DETECTED CONTAMINANTS	Unit	MCL <sup>3</sup>	PHG <sup>4</sup> (MCLG) <sup>5</sup>	Range	Average	Typical Sources in Drinking Water
Turbidity <sup>6</sup> - Tesla Portal	NTU	5 <sup>7</sup>	N	02-2.1	0.4	Soil run-off
Turbidity <sup>6</sup> - Harry Tracy Water Treatment Plant	NTU	0.5 <sup>8</sup>	N	0.04-0.13	0.06	Soil run-off
Turbidity <sup>6</sup> - Sunol Valley Water Treatment Plant	NTU	0.5 <sup>8</sup>	N	0.02-0.11	0.06	Soil run-off
ORGANIC CHEMICALS (City of San Francisco Tap Water)						
Total Haloacetic Acids (HAAs) <sup>9</sup>	ppb	NS	N	<1-38	17	By-product of drinking water chlorination
Total Haloacetoneitriles (HANs) <sup>9</sup>	ppb	NS	N	<0.5-4	1	By-product of drinking water chlorination
Total Halo ketones (Hks) <sup>9</sup>	ppb	NS	N	<0.5-4	1	By-product of drinking water chlorination
Chloral Hydrate (CH) <sup>9</sup>	ppb	NS	N	<0.5-13	8	By-product of drinking water chlorination
Total Organic Halides (TOX) <sup>9</sup>	ppb	NS	N	110-222	146	By-product of drinking water chlorination
INORGANIC CHEMICALS (Source Waters)						
Aluminum	ppb	1000	N	<50-200	<50	Erosion of natural deposits
Chlorate	ppb	NS	N	<20-27	<29	By-product of drinking water chlorination
Fluoride - natural occurrence <sup>15</sup>	ppm	2	1	<0.1-0.2	0.1	Erosion of natural deposits

Secondary Standards - Treated Water <sup>11</sup>	Unit	SMCL <sup>3</sup>	Range	Average	Typical Sources in Drinking Water
Aluminum	ppb	200	<50-86	<50	Erosion of natural deposits
Color	unit	15	<5-7	2	Naturally occurring organic materials
Odor Threshold	TON	3	1	1	Naturally occurring organic materials

Secondary Standards - Source Water <sup>15</sup>	Unit	SMCL	Range	Average
Iron	ppb	300	<100-190	<100
Chloride	ppm	500	<3-19	12
Specific Conductance	uS/cm	1600	8-330	188
Sulfate	ppm	500	<0.5-29	13
Total Dissolved Solids (TDS)	ppm	1000	8-240	128

<b>Key:</b>	
<	= less than the stated detection limit
N	= None
NA	= not applicable
ND	= lower than detection limit
NS	= No Standard
NTU	= Nephelometric Turbidity Unit
pCi/L	= picoCuries per liter
ppb	= parts per billion
ppm	= parts per million
mg/L	= milligrams per liter
ug/L	= micrograms per liter

OTHER CONSTITUENTS - Treated Water <sup>11 17</sup>	Unit	SMCL <sup>3</sup>	Range	Average
Alkalinity (as CaCO <sub>3</sub> )	ppm	NS	14-100	60
Calcium	ppm	NS	4-16	11
Hardness (as CaCO <sub>3</sub> )	ppm	NS	10-110	63
Magnesium	ppm	NS	<0.5-11	6
Methyl Tertiary Butyl Ether (MTBE)	ppb	5	<0.5 <sup>16</sup>	<0.5
pH	unit	NS	7.8-9.6	8.8
Potassium	ppm	NS	<0.5-1.6	0.9
Silica	ppm	NS	4-8	6
Sodium	ppm	NS	3-20	13

## WHAT DOES THIS TABLE MEAN?

This table shows the results of SFPUC Water Quality Analyses for **1999**. It contains the name of each substance, the highest level allowed by regulation (**MCL**). The ideal goals for public health (**PHG**). The amount detected, the typical resources of such contamination, footnotes explaining our findings and a key to units of measurement.

- (7) Filtered water 0.5 NTU; unfiltered water 5.0 NTU.
- (8) Filtered water turbidity must be less than 0.5 NTU 95% of the time. Both plants met this standard 100% of the time.
- (9) Based on Information Collection Rule data collected in 1999 in San Francisco.
- (10) 4-quarter running average in City of San Francisco tap water.
- (11) Data obtained from Alameda East Portal, Sunol Valley, and Harry Tracy Water Treatment Plants.
- (12) Action Level (AL). The 90th percentile level of lead or copper must be less than the action level. Average 90th percentile were reported, 0-35 sampled.
- (13) Monthly positive samples in tap water.
- (14) Data obtained from Calaveras, San Antonio and San Andreas Reservoirs.
- (15) Data obtained from Hetch Hetchy, Calaveras, San Antonio, Lower Crystal Springs, San Andreas, Stone Dam, and Pilarcitos Reservoirs.
- (16) This MTBE data are reported on a voluntary basis since MTBE levels at all locations were below the level at which the State Health Department requires reporting throughout 1999. MTBE was detected at a trace level (1 ppb) on one occasion in San Antonio Reservoir in May 1999. No MTBE was detected in the treated water delivered to your tap.
- (17) Note that arsenic and chromium were not detected in the source or treated water. Perchlorate, monitored in Lower Crystal Springs and Calaveras Reservoirs, was not detected.





Meetings of the City of San Bruno City Council begin at 7:00 PM on the second and fourth Tuesdays of each month and are open to the public. Meetings are held at the City Council Chambers located at City Hall, 567 El Camino Real.

If you have any questions or need further information, please feel free to contact the City of San Bruno Water Division at (650) 616-7162, or by mail at City of San Bruno Water Division, 567 El Camino Real, San Bruno, CA 94066-4247.

Decisions about SFPUC water quality issues are made from time to time in public meetings held at San Francisco City Hall, 1 Doctor Carlton B. Goodlett Place, Room 400, San Francisco CA 94102. Inquiries about these meetings may be directed to the Office of the Commission Secretary at (415) 554-3165. Additional information about the SFPUC water quality may be obtained toll free at (877) 737-8297. Or, feel free to reach them on their web site [www.ci.sf.ca.us/puc/](http://www.ci.sf.ca.us/puc/)

**City of San Bruno**  
**Water Division**  
567 El Camino Real  
San Bruno, CA 94066-4247

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